

Awareness and Perception of Sample Rural Indian Population Towards Denture Marking

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ABSTRACT

Introduction: Labeled denture is a new concept and is upcoming trend in cities and metropolitan cities but still people are not aware of it in rural parts on India. So the study was done to assess the awareness and perception of sample rural Indian population towards denture marking.

Material and methods: The study was undertaken within Sharad Pawar Dental College between 2016-2017. Hundred edentulous patients seeking treatment in Sharad Pawar Dental College were shown four photographs of denture markers. This included patient photograph, paper strip, steel band, bar code. They were asked to answer the Questionnaires which would give us a clue about their attitude and awareness.

Result: About two third of the patient were not interested in getting their dentures marked. In the 30 patients who agreed to get their dentures marked, 23 opted for photograph, 6 for paper strip method and 1 for bar coding.

Conclusion: The study concludes that there is need of awareness in patients about the marking of denture since even after explaining the various advantages of marking almost two third of the subjects were not willing to get their dentures marked.

Key words: Complete Denture, Denture Markers, Patient Photographs, Forensic Identification

INTRODUCTION

Forensic medicine involves a multidisciplinary team effort relying on positive identification methodologies, and a great deal of effort goes into identifying the victim. One method of identification in forensic odontology is labeled dentures. It is a well-documented practice to mark dentures with some means of identification but not a very well practiced one. Principally, these can be considered as identification of the wearer or conversely, identification of the dentures themselves. Marking of dentures is considered to be useful in ascertaining the identity of denture wearers, both in institutional settings and in post-mortem forensic scenarios. Different markers have been developed over the last two decades, and their advantages and limitations are discussed.¹⁻⁵

Since ancient time's dental prosthesis have been used to identify victims of natural and mass disasters.⁶

Ancient

In 2500 BC the first dental evidence was found in pyramid at Giza. It was a skull with gold wire holding molar together.

18 century

In 1850 Dr. Keep was appointed as the first dean of Harvard

Dental college because of his contribution of a great circumstantial evidence in identifying the dead body of Dr. Parkman on the basis of removable partial denture.

20 century

In 1998 Alexander et al from his study concluded that dentures are not labeled regularly by dental practitioners due to various reasons.

Present

In 2008 it was declared that Swedish ID –Band has become the international standard and FDI accepted method of denture marking.⁵

Other recent methods include laser etching, paper strip, bar code, RFID tag etc.⁷

All the methods have certain advantages and limitations. However the ultimate stakeholders are the patients themselves.

As in any study patients form a backbone on which the success of implementation of new concept depends. Hence this pilot study was planned to assess patients perception to the concept of denture marking, in general, and their preference for different marking systems.

MATERIALS AND METHOD

The sample comprised of 100 adult edentulous subjects visiting the Department of Prosthodontics of our institution situated in Central India. Approximately 120 patients were originally approached at random, of whom 100 consented to be part of the study. The age of the subjects ranged between 45 and 75 years. The inclusion of patients specifically visiting this department was deliberate; our objective was to ascertain perception to denture marking. Subjects were handed a questionnaire depending on their choice in either English or Marathi. The questionnaire included basic

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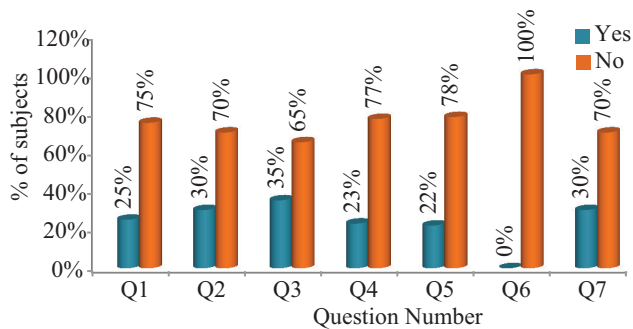
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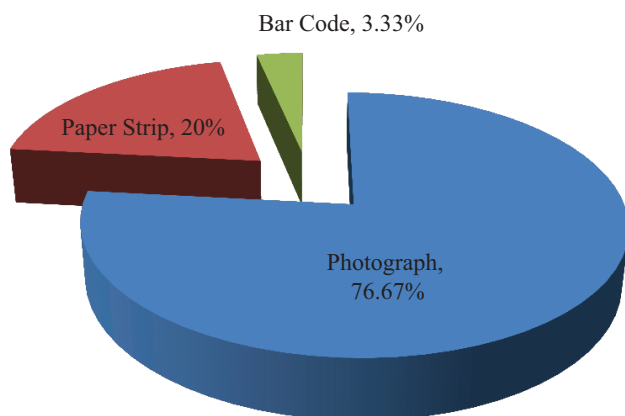
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Questions	Yes	No	z-value
Are you a denture wearer?	25	75	5.77,S
Have you heard of denture marking?	30	70	6.54,S
Did you know that dentures can be marked?	35	65	7.33,S
Do you think coding of prosthesis need special care and hygiene?	23	77	5.46,S
Did you know that denture marking helps in identifying that the denture belongs to you, that it prevents exchange of dentures?	22	78	5.31,S
Are your dentures marked?	0	100	-
Are you interested in getting your dentures marked?	30	70	6.54,S
Z-Z test for single proportion			

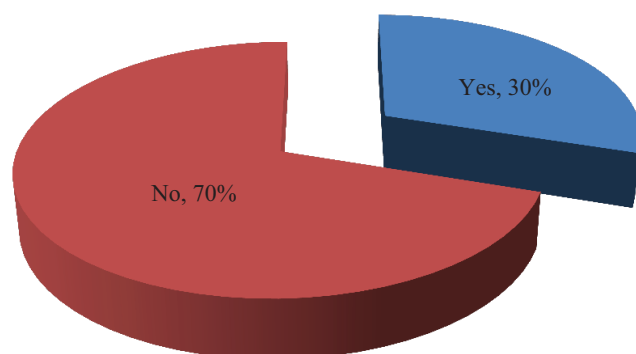
Table-1: Close ended questions



Graph-1: Percentage of subjects



Graph-2: Distribution of subjects if response to the question no 7 is Yes



Graph-3: Distribution of subjects according to overall response from this survey

demographic details along with the questions about the denture markers. The questionnaire included both close and open ended questions.

All patients were shown four photographs of denture markers

assessed in the study.⁸ Each photo containing a marker was evaluated in the questionnaire. The marker assessed were paper strip, metal band, patient photograph, bar code. The patient responses were assessed primarily in terms of the frequency distribution of the various 'Yes/No' answers.

STATISTICAL ANALYSIS

Statistical analysis was done by using descriptive and inferential statistics using z-test for single proportion and software used in the analysis was SPSS 22.0 version and $p < 0.05$ is considered as level of significance. If $Z > 1.96$, it is considered as significant.

RESULTS

Out of 100 patients, 25% were old denture wearer and 75% were new (Q1) (table-1). The awareness of denture marking was low at just 30%, 70% patients had not heard of denture markers (Q2 and Q3). 77% felt that coding of prosthesis would need special care (Q4). 78% patients did not know the importance of denture marking (Q5), 22% of population felt that marking was not important. None of the dentures of the old denture wearer were marked (Q6). Only 30% patients were interested in getting their dentures marked (Q7) i.e 70% were against the denture marking (graph-1). Out of the 30% who were interested in getting their dentures marked, 76.6% gave first preference for photograph marking method. 20% opted for paper strip method of coding. 3% opted for bar code method (graph-2,3).

DISCUSSION

In the survey carried out to gauge the awareness and perception of edentulous patient it was found out that the awareness of patients about denture marking was just 30%. Knowledge about the various denture markers was limited to 15%. While 20% patients had some idea about it, on further questioning it was found that they themselves did not have any marking but on information provided to them about various marking systems they said to have seen some identical markings on some of their known person's denture. 70% of patient refused to get their dentures marked. In spite of explaining to them the various advantages and the different methodology of denture marking the patients were not ready to get them marked. This is in contrast to the study carried out by Cunningham and Reddick in which 85.5% patient were willing to get their dentures marked.⁹ Similar were the results of the study carried out by Richmond and

Pretty where 99% of patients were in favour to get their dentures marked.⁸ Considering the preference of patients for denture markers 65% patients preferred photograph as they found it very interesting to have photograph on their denture. This differs to the study carried out by Ashith Acharya et al in which photograph method was given second preference by the patients.¹⁰ Other reason the patients opted for photograph in our study was they could easily identify them at a glance. Literacy played a key role in selection of the preference as most of the patients were illiterate. Hence they chose a system that readily revealed identity, as in photograph. The least preferred method was the bar code method. Although this method can store more patient data but was not preferred by the patients in our study

The open ended question (Q11) in our study also had some interesting results. Like some patients said they thought there is no need for marking for identification as the whole area knows them. And they will never come across such situation in their lifetime or even after death. When they were explained about identity crisis like in cases of flood or earthquake and the role of death certificate in property matters, they were still not willing. When told about the avoidance of exchange, an advantage of marker, some patients said that since they are the only one wearing dentures at home there are no chances of exchange. The fact that there are less old age homes in India as compared to European countries may lessen the importance of dentures getting exchanged.

CONCLUSION

This study concludes that majority of the patients are not in favour of denture markers. This could be attributed to the fact that denture marker could be population specific. Demographic factors like education plays a important role in driving home the importance of denture markers

Preference wise the photographic method was the most preferred.

Creating and spreading awareness about denture marker should be taken up seriously and should become a part of routine denture fabrication.

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ANNEXURE:- Questionnaire for denture marker

Close ended questions

1. Are you a denture wearer? Yes/No
2. Have you heard of denture marking? Yes/No
3. Did you know that dentures can be marked? Yes/No
4. Do you think coding of prosthesis need special care and hygiene? Yes/No
5. Do you know the importance of denture markings? Yes/No
6. Are your dentures marked? Yes/No
7. Are you interested in getting your dentures marked? Yes/No
8. Please give reasons for your most preferred and least preferred denture marker
Most preferred
Reason: _____
Least preferred
Reason: _____

Open ended questions

9. What are your sources of information about coding of prosthesis?
10. In what way do you think denture markers will help you?
11. Which is the biggest factor preventing you from choosing denture marking?